Rincon Consultants, Inc.
1530 Monterey Street, Suite D
San Luis Obispo, California 93401

805 547 0900
FAX 547 0901

info@rinconconsultants.com
www. rinconconsultants.com

September 5, 2002

Mr. Ken Nordine
Coastal Christian School
2771 Halcyon Road
Arroyo Grande, California 93420

Subject: **Preliminary Biological Resources Assessment of the Proposed Coastal Christian School Project Site, San Luis Obispo County, California**

Dear Mr. Nordine:

At your request, Rincon Consultants, Inc. has completed an assessment of the existing biological resources and potential occurrences of special-status species in relation to the proposed Coastal Christian School site located to the east of the City of Pismo Beach in San Luis Obispo County. This letter report provides the results of our assessment.

STUDY AREA

The approximately 27-acre site is located just outside the eastern portion of the City of Pismo Beach on California's central coast. The project site is bounded to the north and east by open space, to the south by Oak Park Boulevard, and to the west by residential housing and the Pismo Beach Medical Center, which is currently under construction. The project site is located in the San Luis Range approximately two miles inland from the Pacific Ocean coast. The site consists of gently sloping hills ranging in elevation from approximately 260 feet above mean seal level (MSL) at its highest point in the northwestern corner of the site to approximately 120 feet MSL in the southern portion of the site in the vicinity of Oak Park Boulevard. The subject property has a slight southerly-facing aspect.

The project area is characterized by a Mediterranean climate, with mild winters and warm summers. Temperatures are controlled for the most part by the Pacific Ocean. Average annual precipitation in the region of the site is approximately 16 inches, most of which falls between November and April. The natural landscape in the region of the project site is composed of oak woodlands, riparian woodlands along stream courses, chaparral, coastal scrub, and grassland habitats that occur in a mosaic pattern across the landscape. Rangelands of primarily non-native annual grassland comprise a significant portion of the agricultural landscape in the region along with vineyards, orchards, and annually cultivated crops. Included within the natural habitats and agriculture are areas of variable density

urban development including commercial and industrial development, high-density residential areas, and rural residential development.

METHODOLOGY

Rincon Consultants' plant ecologist, Kevin Merk, visited the site on May 16 and 22, 2002, and traversed the entire property on foot. Mr. Merk walked meandering transects across the site to ensure thorough coverage of all habitat types on the property, and documented all habitat types, plant and animal species observed. The purpose of the surveys was to generally characterize the existing biological resources on the site and identify any habitat that could potentially support special-status species or otherwise be of concern to resource agencies. A topographic map (Pacific Western Aerial Surveys, unknown date, 1 inch = 100 feet) illustrating the property boundaries provided by you and the Arroyo Grande North East U.S.G.S. 7.5-minute topographic quadrangle map were used to characterize and map the habitat types within the study area. An aerial photograph (United States Geological Survey) of the site obtained from the internet (TerraServer) was also used to assist in the mapping exercise. No specific surveys for special-status plant or animal species were conducted during this reconnaissance. In addition, the potential need for follow-up, more intensive surveys for sensitive biological resources was assessed, and are included in the Conclusion and Recommendations section of this report.

Prior to field work, a search and review of the California Natural Diversity Data Base (CNDDB, 2002), maintained by the California Department of Fish and Game (DFG), was conducted for an approximately 10-mile radius around the project site. A search range of an approximate 10-mile radius was used to identify potential special-status species issues because it encompasses a sufficient distance to accommodate for regional habitat diversity and to overcome the limitations of the CNDDB. The CNDDB is based on actual recorded occurrences and does not constitute an exhaustive inventory of every resource. The Natural Resources Conservation Service (NRCS) soils survey for the Coastal Part of San Luis Obispo County was reviewed to determine the soils series and mapping units present on the project site. Biological and environmental documents prepared for projects in the vicinity of the proposed project were also reviewed to obtain information about biological resources of the region. Furthermore, this letter report was prepared to be consistent with the general information requirements for the California Environmental Quality Act (CEQA).

RESULTS AND DISCUSSION

At the time of the surveys, the surface of the majority of the site had been altered from site grading and earth-moving activities. A number of graded pads or benches were created onsite, and at the time of the surveys, were primarily devoid of vegetation. Several areas that were removed of vegetation during the grading activities are now revegetated with native and non-native plant species. The grading and earth-moving activities also altered the natural hydrology of the site. Pathways and roadcuts created on the project site during the grading and earth moving activities now drain mostly to a detention basin created in the southeastern corner of the property adjacent to Oak Park Boulevard.

Vegetation

Elements of six habitat types were observed on the Coastal Christian School project site. These habitat types included: 1) Riparian Woodland; 2) Coast Live Oak Woodland; 3) Coastal Scrub; 4) Wetland; 5) Non-Native Annual Grassland; and 6) Ruderal (or disturbed). Large areas of bare soil and exposed sandstone bedrock were observed on the site and were included in the disturbed or ruderal habitat type. These bare soil areas were apparently the result of previous grading and earth moving activities on the site. Classification of the on site habitat types or vegetation communities is based generally on Robert F. Holland's classification of terrestrial vegetation communities (1986), and was compared to Sawyer and Keeler-Wolf's vegetation classification system (1995) for consistency. The following discussion focuses on the habitat types delineated on the attached habitat map and briefly describes the existing conditions and potential occurrences of special-status species within the project boundaries.

Riparian Woodland

This habitat type corresponds to the Central Coast Arroyo Willow Riparian Forest and Central Coast Arroyo Willow Riparian Scrub plant communities described by Holland, and the Arroyo Willow Series as described by Sawyer and Keeler-Wolf. The riparian woodland habitat type was observed in the southern portion of the site within the lower reach of an onsite natural drainage feature, and is characterized as a nearly closed canopy of arroyo willows (*Salix lasiolepis*). The natural drainage feature traverses the site in a mostly west to east direction, and is primarily a gentle swale where surface runoff sheet flows across the site. No defined bed or bank was observed in this area, but localized areas where water apparently ponds for a greater period of time were present. Another natural drainage feature that originates offsite to the northeast of the subject property enters the northeastern corner of the site, and helps form the eastern boundary of the property. This drainage flows in a primarily west to east direction, and did not contain water at the time the surveys were conducted. Furthermore, no riparian vegetation was observed within the project boundaries along this ephemeral drainage. Coast live oak woodland with a primarily annual grassland understory was the dominant habitat type in this area. The overall hydrology of the site drains in an easterly direction towards an un-named tributary to Meadow Creek further to the east-southeast.

The overstory of this habitat type is dominated by arroyo willows, but it also contains other native shrubs scattered along the perimeter such as coyote brush (*Baccharis pilularis* var. *consanguinea*) and small coast live oak trees (*Quercus agrifolia*) that are more typical of the surrounding upland habitat types. The riparian understory on the project site is composed mostly of herbaceous native plants typical of wetland and seasonally moist areas along the central coast of California. Native understory species observed within the study area included willow dock (*Rumex salicifolia*), brown-headed rush (*Juncus phaeocephalus*), birds foot trefoil (*Lotus corniculatus*), California blackberry (*Rubus ursinus*), and poison oak (*Toxicodendron diversilobum*).

Riparian woodland and scrub communities provide habitat for a variety of songbirds including common yellowthroat (*Geothlypis trichas*), Swainson's thrush (*Catharus ustulatus*), plain titmouse (*Baeolophus inornatus*), song sparrow (*Melospiza melodia*), as well as amphibians and reptiles such as the Pacific chorus frog (*Pseudacris regilla*) and western fence lizard (*Sceloporus occidentalis*). During the site visits, numerous songbirds were observed using this habitat type on the project site.

Coast Live Oak Woodland

The oak woodland areas within the project site corresponds to the coast live oak woodland described by Holland, and the coast live oak series as described by Sawyer and Keeler-Wolf. This habitat type, or vegetation community, occurs along the eastern facing slope in the southern portion of the site, along the ephemeral drainage in the north-eastern portion of the site, as well as in both dense and scattered patches throughout the site. The understory vegetation associated with this habitat type was dominated primarily by non-native annual grasses. However, typical native oak woodland understory does occur to a lesser extent within these areas, especially along the southern site boundary, and includes: hummingbird sage (*Salvia spathacea*), hedgenettle (*Stachys bullata*), poison oak, and California blackberry. Several large toyon shrubs (*Heteromeles arbutifolia*) also occur intermixed with coast live oak trees and neighboring coastal scrub habitat. In the central portion of the project site, individual coast live oaks are found on gentle slopes in and adjacent to the graded pads or benches.

Oak woodlands provide habitat for a variety of wildlife species. Oaks provide nesting sites and cover for birds and many mammals. Woody debris and duff in the woodland understory create foraging areas for small mammals and microclimates suitable for amphibians and reptiles. Acorns are a valuable food source for many animal species, including the California quail (*Callipepla californica*), western gray squirrel (*Sciurus griseus*), and black-tailed deer (*Odocoileus hemionus*). Other representative animal species of oak woodlands observed or expected to occur onsite include southern alligator lizard (*Gerrhonotus multicarinatus*), common king snake (*Lampropeltis getulus*), scrub jay (*Aphelocoma corulescens*), plain titmouse (*Parus inornatus*), California towhee (*Pipilo crissalis*), dark-eyed junco (*Junco hyemalis*), North American raccoon (*Procyon lotor*), and Virginia opossum (*Didelphis virginianus*).

Coastal Scrub

The coastal scrub vegetation community within the study area is similar to the Central (Lucian) Coastal Scrub as described by Holland and the Coyote Brush Series as described by Sawyer and Keeler-Wolf. This habitat type is characterized by soft-leaved shrubs such as coyote brush, sticky monkey flower (*Mimulus aurantiacus*), toyon, California coffeeberry (*Rhamnus californica*), and black sage (*Salvia mellifera*). Native herbaceous perennial plant species such as deerweed (*Lotus scoparius*), California rose (*Rosa californica*), and purple needle grass (*Nassella pulchra*) were also present within this community on the project site. This habitat type occurs throughout the project site in a mosaic with the oak woodland, grassland and ruderal/disturbed habitat types. Elements of this habitat type were also

observed with non-native annual grassland habitat on the slopes between the graded pads and benches.

Coastal scrub communities typically provide cover and nesting for a variety of animals such as western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus viridus*), blue-gray gnatcatcher (*Polioptila caerulea*), wrentit (*Chamae fasciata*), California mouse (*Peromyscus californicus*), and gray fox (*Urocyon cinereoargentus*). However, the limited and disjunct occurrences of coastal scrub on the project site probably reduce its wildlife habitat value. However, when this habitat type co-mingles with the oak woodland habitat in the southern and northern portion of the site, the contiguous plant cover creates higher quality wildlife habitat.

Wetlands

Two wetland habitat types occur on the project site, and include freshwater emergent wetland and seasonal wetland. The freshwater emergent wetland habitat type was observed in and surrounding the detention basin adjacent to Oak Park Boulevard in the south-western portion of the site. The detention basin contained ponded water with emergent vegetation around the perimeter at the time of the surveys, and therefore, corresponds to the Coastal and Valley Freshwater Marsh vegetation community described by Holland and the Cattail and Bulrush Series described by Sawyer and Keeler-Wolf. This habitat type typically occurs along the coast and in coastal valleys near river mouths, along drainages, and around the margins of lakes and springs. Freshwater marsh is typically characterized as lacking significant current, and being permanently flooded with fresh water. This habitat type is identified by the CNDDB as a natural community of special concern. Common native plant species observed in this habitat area include cattail (*Typha latifolia*), common tule (*Scirpus californicus*), umbrella sedge (*Cyperus eragrostis*), rabbitfoot grass (*Polypogon monspeliensis*), purple loosestrife (*Lythrum hyssopifolium*), and willow dock.

The seasonal wetland habitat type was also observed within the natural drainage feature in the southern portion of the site further upslope from the detention basin. It consists of the herbaceous understory component in the riparian woodland habitat type, and also extends further upslope from the riparian woodland in the gentle swale portion of the natural drainage feature as an element of the non-native annual grassland habitat type. The seasonal wetland habitat type corresponds to the Vernal Marsh vegetation community described by Holland, and to a lesser degree the Sedge, Spikerush, and Creeping Ryegrass Series described by Sawyer and Keeler-Wolf. Plant species observed as the herbaceous understory of the riparian woodland included common nutsedge, common spikerush (*Eleocharis macrostachya*), brown-headed rush, toad rush (*Juncus bufonius*), and bird's foot trefoil. Further upslope where this habitat type extends into the non-native annual grassland, native water-tolerant plant species observed included willow dock, curly dock (*Rumex crispus*), creeping wildrye (*Leymus triticoides*), and brown-headed rush.

The freshwater marsh habitat type provides habitat for aquatic invertebrates such as water striders and boatmen, amphibians such as the Pacific chorus frog, and aquatic birds such as the mallard duck (*Ana platyrhynchos*). Although this habitat type does not occupy a large

portion of the site, the emergent wetland vegetation associated with the freshwater marsh may also provide breeding habitat for birds such as red-winged blackbird (*Agelaius phoeniceus*) and common snipe (*Gallinago gallinago*). Due to their lack of perennial water and well-developed vegetative stratum, the onsite Seasonal Wetland habitat type is considered to provide the same wildlife habitat and support the same wildlife species as the onsite non-native annual grassland, except where it occurs as the understory component of the riparian woodland habitat type.

Non-Native Annual Grassland

The non-native annual grassland habitat type corresponds to the non-native grassland described by Holland, and the California annual grassland series as described by Sawyer and Keeler-Wolf. On the project site, this habitat type is characterized by a mixture of native and introduced herbaceous plant species. Because of the extensive alteration of the site's topography, it is difficult to determine if the site was dominated by this habitat type or whether it was a mosaic of several habitat type. Currently, the non-native annual grassland habitat type occurs surrounding the oak woodland and riparian habitat types, as a component of the oak woodland understory, and on the slopes between the cut pads or benches interspersed with coastal scrub habitat.

Common introduced grass species observed on the site included slender wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), red brome (*Bromus madritensis* ssp. *rubens*), and Italian ryegrass (*Lolium multiflorum*), along with non-native herbs such as mustard (*Brassica nigra*), yellow star-thistle (*Centaurea solstitialis*), chicory (*Cichorium intybus*), prickly lettuce (*Lactuca serriola*), and common knotweed (*Polygonum arenastrum*). Native species observed in this area included California croton (*Croton californica*), California poppy (*Eschscholzia californica*), four spot (*Clarkia purpurea* ssp. *quadrivulnera*), and turkey mullein (*Eremocarpus setigerus*). Small areas of purple needle grass (*Nassella pulchra*) were observed in the grassland habitat type where the slope was a little steeper than surrounding areas and was slightly drier to the surrounding habitat because of a slight southern aspect. Additionally, two occurrences of the federally-endangered Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*) were observed in this habitat type in the southern portion of the property.

Grasslands provide foraging habitat for small mammals which in turn serve as a prey base for a variety of animals, including snakes, raptors ("birds of prey"), and coyotes (*Canis latrans*). Numerous invertebrate species (such as insects), many of which provide a food source for larger animals such as lizards, birds, and some small mammals can also be found within grassland communities. Other animal species common to grasslands include ringneck snake (*Diadophis punctatus*), gopher snake (*Pituophis melanoleucis*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and black-tailed deer. A number of gopher burrows (*Thomomys bottae*) and several California ground squirrel (*Spermophilus beecheyi*) burrows were observed within grassland areas within the study area. Additionally, several large burrows potentially occupied by the American badger (*Taxidea taxus*) were observed in the grassland habitat adjacent to the oak woodlands in the southern western portion of the site near Oak Park Boulevard.

Ruderal/Disturbed

The ruderal/disturbed habitat type was observed throughout the project site in areas previously disturbed from grading and earth-moving activities. This habitat type is characterized as large areas of bare sand and gravel, as well as exposed sandstone bedrock with weedy or little to no vegetation. Areas of escaped landscaping or horticultural varieties such as garden gazania (*Gazania* sp.) were also included in this habitat type. Some areas within this habitat type are revegetating with non-native and native plant species. Plant species observed in this habitat type included non-native species such as slender wild oats, ripgut brome, red brome, English plantain (*Plantago lanceolata*), wild radish (*Raphanus sativa*), fennel (*Foeniculum vulgare),* and Bermuda buttercup (*Oxalis pes-caprae*). Native plant species observed in this habitat type included sky lupine (*Lupinus nanus*), arroyo lupine (*Lupinus succulentus*), coast tarweed (*Hemizonia corymbosa*), sticky monkey flower and deerweed. Several non-native, invasive plant species were also observed in areas of the site identified as ruderal habitat. Non-native invasive plants documented on the project site included yellow star thistle, pampas grass (*Cortaderia jubata*), and Kikuyu grass (*Pennisetum clandestinum*). Additionally, a large bladed pad in the northern-central portion of the site contains approximately 15 Wells' manzanita shrubs (*Arctostaphylos wellsii*), several arroyo willows, and one black cottonwood growing in sandy, gravelly soils and exposed sandstone bedrock. Generally, ruderal areas provide marginal habitat for wildlife, especially considering the large areas on the project site without any significant wildlife cover.

Special Status Species

For the purpose of this letter report, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (ESA); those considered "species of concern" by the USFWS; those listed or proposed for listing as rare, threatened, or endangered by the California Department of Fish and Game (DFG) under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern" by the DFG; and plants occurring on lists 1B, 2, and 4 of the CNPS's Inventory of Rare and Endangered Vascular Plants of California (CNPS 1994).

Rincon Consultants plant ecologist developed a target list of special-status plant and animal species that occur in the Pismo Beach and Arroyo Grande area based on our review of the CNDDB, previous studies from the vicinity of the site, and other sources including our own knowledge of the area. Field reconnaissance to identify habitat types and an evaluation of the on-site soils helped refine the target list of species and focus our assessment of the actual or potential for occurrence of special-status species on the site.

Special-Status Plants and Plant Communities of Special Concern

The CNDDB contains records of a number of special-status plant species and plant communities of special concern that are known from relatively localized occurrences in the vicinity of the project site. The majority of these species have highly specialized habitat

requirements (i.e.: coastal dunes, brackish marsh, diatomaceous shale soils, serpentine derived soils and serpentine rock outcrops) that do not occur on the project site. The special-status species and their listing status targeted during this reconnaissance included the following: Hoover's bent grass (*Agrostis hooveri*, CNPS List 1B); sand mesa manzanita (*Arctostaphylos rudis*, CNPS List 1B); Santa Lucia manzanita (*Arctostaphylos luciana*, Federal Species of Concern, CNPS List 1B); Santa Margarita manzanita (*Arctostaphylos pilosula*, CNPS List 1B); Wells' manzanita (*Arctostaphylos wellsii*, CNPS List 1B); San Luis Obispo mariposa lily (*Calochortus obispoensis*, CNPS List 1B); Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*, Federal Endangered, State Rare, CNPS List 1B); dune larkspur (*Delphinium parryi* ssp. *blochmaniae*, CNPS List 1B); Kellogg's horkelia (*Horkelia cuneata* ssp. *sericea*); and California spineflower (*Mucronea californica*, CNPS List 4). As previously discussed, no focused surveys for special-status species were conducted for the project.

Two plant communities of special concern were observed on the project site, and include Central Coast Arroyo Willow Riparian Woodland and wetland. The wetland habitat type includes both seasonal wetland and freshwater emergent wetland. Due to the great reduction and alteration of riparian and wetland habitats in California since the turn of the century, they have been identified by the California Natural Diversity Database (CNDDB) as natural communities of special concern. As previously discussed, these two plant communities were observed in the southern portion of the site, and were associated with the natural drainage feature in this area. Additionally, coast live oak woodland, a plant community of regional importance, was observed in the southern and northern portions of the site, and as scattered elements throughout the central portion of the site.

Two special-status plant species were observed on the site during field reconnaissance. Two occurrences of Pismo clarkia, and an occurrence of Wells' manzanita were observed on the project site. Additionally, potential habitat for five other special-status plant species identified in the CNDDB, which includes Hoover's bent grass, San Luis Obispo mariposa lily, dune larkspur, Kellogg's horkelia, and California spineflower, was observed on-site. Other perennial special-status plant species such as Santa Lucia manzanita, sand mesa manzanita, and Santa Margarita manzanita would have been observable at the time of the surveys, and therefore, are not expected to occur on the project site. The following species accounts briefly present relevant ecological and range information and legal status for all the special-status plant species observed or with potential to occur on the project site:

- Hoover's bent grass is a CNPS List 1B species in the grass family (Poaceae). It is a perennial bunch grass that occurs from northern Santa Barbara County to southern San Luis Obispo County, and typically flowers from April through July. Although this species was not observed during the field reconnaissance of the site, potential habitat for this species was observed in the coast live oak woodland and coastal scrub habitat types. Given that surveys of the site were conducted during this species blooming period, and it was not observed, this species is not expected to occur on the project site.
- Wells' manzanita, a CNPS List 1B species, is medium to large-sized perennial shrub in the heather family (Ericaceae). This species is known to occur in chaparral habitat types in the San Luis and Santa Lucia Ranges, and is usually found growing on

sandy soils or exposed sandstone hillsides. This species typically forms large stands where it can be the dominant plant. On the project site, approximately fifteen plants were observed growing on exposed sandstone and gravelly soils on a previously graded pad in the northern-central portion of the site. This was the only location on the project site where this species was observed.

- San Luis Obispo mariposa lily, a CNPS List 1B species, is a small, bulbiferous, herbaceous perennial plant in the lily family (Liliaceae). This plant is endemic to San Luis Obispo County and is known from localized occurrences in the San Luis Obispo and Arroyo Grande region. It usually occurs in serpentine grassland, chaparral, and coastal scrub. However, this species has been found growing in sandy soils and sandstone outcrops on nearby lands to the northeast of the project site. The blooming period for this species is typically from May to July. The intact native habitat surrounding the previously graded pads within the project site represents potential habitat for this species, and although this plant was not observed during field reconnaissance of the site, the presence or absence of this species cannot be determined at this time. Seasonally-timed rare plant survey would be required to determine this species presence or absence from the project site.

- Pismo clarkia is a federally-listed Endangered, state-listed Rare, and CNPS List 1B species in the evening primrose family (Onagraceae). This species is an annual herb typically found in open sandy soils within chaparral, coastal scrub, and at the edges (ecotone) of grassland and woodland habitats between 45 and 800 meters. Pismo clarkia typically blooms from May through June. The CNDDB contains a number of known occurrences of Pismo clarkia in the vicinity of the study area, and two Pismo clarkia occurrences were observed along the southern property boundaries of the site during field reconnaissance. Specifically, one occurrence consisting of approximately 25 plants was observed growing at the edge of the coast live oak woodland in non-native annual grassland habitat in the southern central portion of the site adjacent to the riparian woodland habitat type. The second occurrence was located further southeast towards Oak Park Boulevard along the southern property boundary. This occurrence contained approximately fifty plants. While these were the only two Pismo clarkia occurrences observed during field reconnaissance of the site, there is a potential that this species occurs in similar habitat in another portion of the site.

- Dune larkspur, a CNPS List 1B species, is a perennial herb in the buttercup family (Ranunculaceae) that typically occurs on rocky, sandy soils in coastal scrub and maritime chaparral habitat types. This species usually blooms from April through May. The CNDDB identifies several occurrences of this species in the vicinity of the study area, and one occurrence was mapped in the vicinity of Los Berros, southeast of the project site on the west side of Highway 101. Although no larkspur species were observed during the site visits, sandy soils and coastal scrub habitat types are present within the project site, and therefore represents potential habitat for this species. Seasonally-timed, focused rare plant surveys would be required to accurately determine this species presence or absence from the project site.

- Kellogg's horkelia, a Federal Species of Concern and a CNPS List 1B species, is a perennial herb in the rose family (Rosaceae) that occurs in sandy soils (typically stabilized pre-flandrian dunes) in coastal scrub and maritime chaparral habitat on the Central Coast of California. This species typically flowers from April through September. Although the closely related wedge-leaved horkelia (*Horkelia cuneata* ssp. *cuneata*) was observed during the site visits, Kellogg's horkelia was not. Kellogg's horkelia would have been identifiable at the time the surveys were conducted, and although potential habitat for this species is present on site, is unlikely to occur within the property boundaries.
- California spineflower is an annual herb included on the CNPS's List 4 of rare vascular plant species (a watch list). California spineflower is known to occur in sandy soils in woodland, chaparral, coastal scrub and grassland habitat types throughout the foothills of the Santa Lucia and San Luis Ranges in San Luis Obispo County. This species typically blooms from March through August, and would have been identifiable at the time the surveys of the site were conducted. Although suitable habitat for this species is present of the site, it is unlikely that this species occurs within the project boundaries.

Special-Status Wildlife

The CNDDB has the recorded occurrence of 17 special-status wildlife species within an approximately 10-mile radius of the project site. Because of the broad 10-mile radius CNDDB search range, the majority of these species listed require specific habitat types or habitat elements that are not present on the project site, or the site is outside of the known range of a species. The following special-status wildlife species were identified as potentially occurring on or in the immediate vicinity of the project site: southwestern pond turtle (*Clemmys marmorata pallida*, a California Species of Concern); California red-legged frog (*Rana aurora draytonii*, CRLF; federally Threatened, California Species of Concern); American badger (*Taxidea taxus*, Federal Species of Concern); and the two-striped garter snake (*Thamnophis couchi*, Federal Species of Concern, California Species of Concern). The following discuses these species, and whether or not the site could potentially support these species or if they were observed during field reconnaissance of the site:

- The CNDDB includes a number of special-status raptor species, including the Cooper's hawk (*Accipiter cooperi*), sharp-shinned hawk (*Accipiter striatus*), golden eagle (*Aquila chrysuetos*), burrowing owl (*Athene cunicularia*), northern harrier (*Circus cyanus*), white-tailed kite (*Elanus leucrus*), prairie falcon (*Falco mexicanus*), California condor (*Gymnogyps californianus*), and loggerhead shrike (*Lanius ludovicianus*) as occurring within the 10-mile search range. Although known from the region, it is very unlikely that the golden eagle or California condor use the site for foraging. Cooper's hawk, sharp-shinned hawk, northern harrier, white-tailed kite, prairie falcon, and loggerhead shrike are wide ranging birds-of-prey that could potentially use the project site for foraging during migration or movement through the region. Burrowing owls require California ground squirrel colonies typically in grassland habitat with appropriate viewing areas unobstructed from shrubs or other vegetation. Based on field observations, project site does support a prey base

(ground squirrels and other small rodents) for the above raptor species, but does not support a large occurrence of ground squirrels that could potentially provide suitable nesting habitat for the burrowing owl. Therefore, the study area supports potential nesting and foraging habitat for Cooper's hawk, sharp-shinned hawk, northern harrier, prairie falcon, and loggerhead shrike.

- The American badger is a Federal Species of Concern that is known to occur throughout the hills above the Pismo Beach and Arroyo Grande area. American badgers typically require loose, friable soils, and open, uncultivated land where they prey on burrowing rodents. Several large, apparently active American badger dens were observed in the southwestern portion of the site in the vicinity of Oak Park Boulevard. Although no badgers were observed during the field reconnaissance of the site, there is a high potential that this species may occur on the site.
- The nearest recorded CNDDB occurrences for the black legless lizard (*Anniella pulchra nigra)* is approximately 25 miles northwest of the study area, near Morro Bay State Park. The nearest recorded CNDDB occurrences for the silvery legless lizard (*Anniella pulchra pulchra)* is approximately 20 miles northwest of the study area, near Cuesta Community College. The black legless lizard and silvery legless lizard are California Species of Concern that occur in a broad range of habitats, including coastal dunes, dune scrub, coastal sage scrub, riparian scrub, chaparral, oak woodland, and pine woodland and because only the head is used for burrowing, a common feature of these habitats is the presence of loose soil with a high sand content. This lizard usually forages at the base of shrubs or other vegetation either on the surface or just below it in leaf litter or sandy soil where they eat insect larvae, small adult insects, and spiders. The project site has the potential to support this species because the site contains loose sandy soils and coastal scrub and oak woodland habitat. No focused legless lizard surveys or the project site were conducted, therefore, we cannot determine this species presence or absence at this time.
- The CNDDB has numerous occurrences of the Federally Threatened California red-legged frog (CRLF) within both a five-mile and ten-mile radius of the project site, one of which is located in Arroyo Grande Creek. In addition, the project site is located within the designated Critical Habitat for this species. Preferred aquatic habitat of the CRLF is characterized by dense shrubby, or emergent riparian vegetation, such as arroyo willow, cattails, and bulrushes, associated with deep (greater than 2 feet), still or slow-moving water (Hunt, 2000). However, CRLFs use a variety of habitat types, including ponds, intermittent streams, seasonal wetlands, springs, seeps, permanent ponds, perennial creeks, man-made aquatic features (e.g., agricultural ponds), marshes, riparian corridors, blackberry thickets, non-native annual grasslands, and oak woodlands and savannas. Additionally, CRLFs successfully breed in artificial ponds with little or no emergent vegetation. The final designation of CRLF Critical Habitat (USFWS March 2001b) states that at any time of the year, adult CRLFs may move long distances from breeding sites. Marginal habitat for this species was observed onsite in the riparian woodland and wetland areas including the detention basin adjacent to Oak Park Boulevard. Since the

project site is physically separated from nearby known CRLF occurrences, it is unlikely that the project site is being used as a dispersal corridor by CRLF. However, a USFWS protocol survey for the CRLF would be required to accurately determine this species presence or absence from the project site.

- The southwestern pond turtle is a Federal and State Species of Concern. The southwestern pond turtle is a highly aquatic species that will inhabit streams and ponds throughout southern and Central California. The pond turtle requires permanent water and lays its eggs in the banks of creeks or up to 100 meters in adjacent uplands in a variety of soil types. No pond turtles were observed within the project site, although potential habitat is located within the freshwater marsh habitat type and open water associated with the detention basin adjacent to Oak Park Boulevard. Furthermore, the adjacent riparian habitat potentially provides a movement corridor for this species. While Oak Park Boulevard creates a substantial barrier for this species, we cannot determine this species presence or absence from the site at this time.
- Two-striped garter snake is a Federal and State Species of Concern. The two-striped garter snake, a variety of western aquatic garter snake, typically requires clear, permanent streams with rocky beds, protected pools, and dense riparian vegetation near shore. Although the habitat on the project site is not optimal for this species, given the proximity of the site to an un-named tributary to Meadow Creek further to the southeast and the riparian, coastal and valley freshwater marsh and open water habitat associated with the detention basin, there is potential that this species could occur on the site at some point in time.

CONCLUSION AND RECOMMENDATIONS

The study area contains six habitat types typical of the general area, including Riparian Woodland, Non-Native Annual Grassland, Coast Live Oak Woodland, Coastal Scrub, Wetland, and Ruderal/Disturbed. Riparian and wetland habitats, in general, are of special concern to the resource agencies due to the extensive loss of these habitat types in California. Any activity that would remove or otherwise alter riparian or wetland habitat is closely scrutinized by the resource agencies, and would require a Streambed Alteration Agreement from the DFG. Areas within these two habitat types could potentially fall under the jurisdiction of the United States Army Corps of Engineers, and any impacts to "jurisdictional" areas may require a Department of the Army Section 404 permit pursuant to the Clean Water Act. Any impacts to riparian or wetland habitat will require in-kind compensatory mitigation.

The site potentially provides suitable habitat for several special-status plant species, two of which, Wells' manzanita and Pismo Clarkia, were observed during the reconnaissance surveys of the site. While total avoidance of the Pismo clarkia occurrences and the surrounding habitat is recommended at this time, potential mitigation measures could be developed for impacts to the Wells' manzanita occurrences to lessen these impacts to a less than significant level. Although no special-status wildlife species were directly observed

during the two site visits, the site potentially supports the American badger, and the wetland and riparian habitat in the southern portion of the site could provide potential movement, foraging, dispersal and aestivation habitat for the California red-legged frog and southwestern pond turtle.

The following identifies potential significant impacts on biological resources that could result from project implementation and offers recommended mitigation measures that could offset significant impacts on biological resources.

- **Special-Status Plants** – two rare or special-status plants have been identified as occurring on the project site, and the potential exists for several other rare plant species to occur in the undisturbed portions of the site. The two special-status plant species observed during the field surveys conducted for the preparation of the biological resources assessment were Wells' manzanita (*Arctostaphylos wellsii*) and Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*). Wells' manzanita has no state of federal listing at this time, but the California Native Plant Society (CNPS) has placed it on their List 1B, and therefore impacts to this species could be considered significant and require mitigation under CEQA. Pismo clarkia is a Federal Endangered, State Rare, and CNPS List 1B species. It is uncertain at this time whether the USFWS or DFG would allow any removal of Pismo clarkia plants or impacts to its potential habitat. At this stage in the planning process, total avoidance of the area where this species occurs is recommended. The USFWS or DFG should be consulted to determine whether they would allow a small amount of impacts to some of the plants or minor alteration of this species habitat. Similarly with Wells' manzanita, any impacts to Pismo clarkia plants or its habitat will require onsite mitigation or a contribution to an offsite mitigation bank, if available. Currently, no mitigation for Pismo clarkia has been establishes. As far as the other rare plants that potentially occur on the project site, only seasonally-timed (spring and early summer) focused rare plant surveys of the entire site would provide the necessary information to accurately determine the presence or absence of these special-status plants. The DFG and CNPS recommend that rare plant surveys be conducted throughout the blooming period of the rare plant species that potentially occur on site. Therefore, rare plant surveys of the site should be conducted on a monthly schedule beginning in March and April, and continue through mid to late summer to ensure the blooming periods of the various rare plant species are adequately covered.

- **Special-Status Wildlife** – Several special-status wildlife species have the potential to occur on the project site, including American badger, southwestern pond turtle, two-striped garter snake, and the California red-legged frog (CRLF). American badgers are known from the area, and have been documented as occurring on nearby lands. During recent site visits, several potential badger dens were observed along the project site's southern boundary. Furthermore, potentially suitable aquatic habitat for southwestern pond turtle, CRLF, and two-striped garter snake was observed in and surrounding the small detention basin in the southwestern corner of the site along Oak Park Boulevard. At the time of the surveys the detention basin contained water and emergent vegetation along its margins, and therefore, could potentially provide

suitable for these three special-status aquatic wildlife species. Although no southwestern pond turtles, CRLFs or two-striped garter snakes were observed during the field surveys, only focused surveys for these species would accurately determine their presence or absence from the project site.

- **Oak Woodland Issues** – Oak woodlands dominated by coast live oak were observed along the northern and southern boundaries of the project site. Individual oak trees and scattered elements of oak woodlands also occur throughout the remainder of the project site. If oak woodlands or individual oak trees are proposed to be removed, then compensatory mitigation would require a 4:1 replacement ratio (trees planted to trees removed) for all oak trees greater than six inches diameter at breast height (DBH) as described in the oak tree standard mitigation measures of San Luis Obispo County. If grading or any heavy machinery operation is proposed to occur in an area occupied by oak trees, then a minimum distance of 1.5 times the dripline (distance from the trunk to the outer most limits of leaves and branches) should be protected with orange temporary or chain link fencing surrounding each oak tree or clusters of trees within the proposed construction area. Development in and around protected oak trees needs to avoid compacting the soils within the dripline of the trees and to avoid any supplemental irrigation or runoff from adjacent irrigation during the dry season. Compaction of soils and irrigation during the dry season will lead to the rapid decline of the oak trees health. Retention of snags (standing dead trees) and dying trees should be considered as this adds habitat values for hole and cavity nesting bird species that rely on the decaying tree elements for survival and reproduction. Given the potential for raptors to nest on site, pre-tree removal surveys should be conducted to determine that nesting birds are not affected by construction-related activities. Preferably, tree removal should be conducted outside the breeding season between September and February.

- **Riparian Woodlands, Waters of the United States, and Wetlands Issues** – a natural drainage feature traverses the southern portion of the project site in a primarily north-south direction. A portion of this drainage feature may fall under the jurisdiction of the Corps and would require a permit or authorization to fill or modify for the project. A wetland delineation utilizing methods acceptable to the Corps would be required in order to determine the extent and location of Corps jurisdictional waters. Any impacts to waters of the United States would require at the least a 2:1 mitigation ratio (habitat created to habitat impacted). The Regional Water Quality Control Board will also need to be contacted during the project review time to obtain a 401 Water Quality Certification. Additionally, the Department of Fish and Game regulates impacts to riparian vegetation, as well as impacts to drainages with a definable bed and bank through Sections 1600-1603 of the Fish and Game Code. As long as the construction footprint avoids this natural drainage feature, and stays away from the riparian vegetation associated with this feature, no adverse impacts to riparian woodlands or potential waters of the United States including wetlands related to the construction of the proposed project would occur, and therefore, no permits would be required. Removal of or trimming back any of the onsite willow trees would require a Streambed Alteration Agreement from the Department of Fish and Game. Typically, the Department of Fish and Game will

require a 3:1 to 5:1 mitigation ratio for all impacts to riparian woodlands on the project site. The resource agencies usually require on-site mitigation, however, off-site mitigation in the form of a contribution to a mitigation bank may also possible if approved by the resource agencies. If onsite compensatory mitigation for impacts to riparian or wetland habitat is required, a habitat mitigation and monitoring plan to be approved by both the Corps and DFG will be required prior to the issuance of any permits. Furthermore, compensatory mitigation required by the resource agencies will need to be monitored for five to ten years to ensure success of the mitigation efforts before the Corps or DFG sign off on the project.

In conclusion, the project site contains several constraints relating to the existing natural resources on the site. As discussed above, the known and potential occurrences of special-status plant and animal species, potential waters of the United States that may occur in the natural drainage feature, the riparian vegetation associated with this feature, and coast live oak woodland habitat type will require sensitive planning in order to minimize impacts to these resources. Although the riparian habitat and known occurrence of special-status plants should not deter development of the site, providing an appropriate amount of preserved open space to provide habitat for the federally Endangered Pismo clarkia, as well as providing space to handle the natural drainage of the site would be of primary importance. As previously discussed, off-site mitigation for impacts to riparian and wetland habitat, and possibly Pismo clarkia individuals and habitat, may be a possibility, however, this is typically a much more difficult and costly mitigation option.

LIMITATIONS, ASSUMPTIONS AND USER RELIANCE

This limited Biological Assessment was prepared for use solely and exclusively by Mr. Ken Nordine representing the Coastal Christian School. Mr. Nordine has requested this assessment and may use it to provide information to satisfy regulatory agency requirements. No other use or disclosure is intended or authorized by Rincon, nor shall this report be relied upon or transferred to any other party without the express written consent of Rincon Consultants. Mr. Nordine agrees to hold Rincon harmless for any inverse condemnation or devaluation of said property that may result if Rincon's report or information generated is used for other purposes. Also, this report is issued with the understanding that it is to be used only in its entirety.

This work has been performed in accordance with good commercial, customary, and generally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigations are limited by the scope of work performed. The identification of potential special-status species habitat has been based on a suitability analysis level only and did not include definitive surveys for the presence or absence of the species that may be present. Definitive surveys for special-status wildlife and plant species generally require specific survey protocols requiring extensive field survey time to be conducted only at certain times of the year. No other guarantee or warranties, expressed or implied are provided.

The findings and opinions conveyed in this report are based on findings derived from site

reconnaissance, review of the California Natural Diversity Data base report, and specified information sources. This report is not intended as a comprehensive biological characterization and should not be construed as such. Standard data sources, such as the California Natural Diversity Data Base, relied upon during the completion of this type of report may vary with regard to accuracy and completeness. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary analysis.

We trust that this information will assist with your reporting obligations at this time. Please do not hesitate to call Kevin Merk if you have any questions or concerns.

Sincerely,

RINCON CONSULTANTS, INC.

Kevin Merk
Senior Plant Ecologist
Restoration Specialist

David K. Wolff
Manager, Biological Resources Group
Certified Professional Wetland Scientist

Attachments: Habitat Map
Plant List

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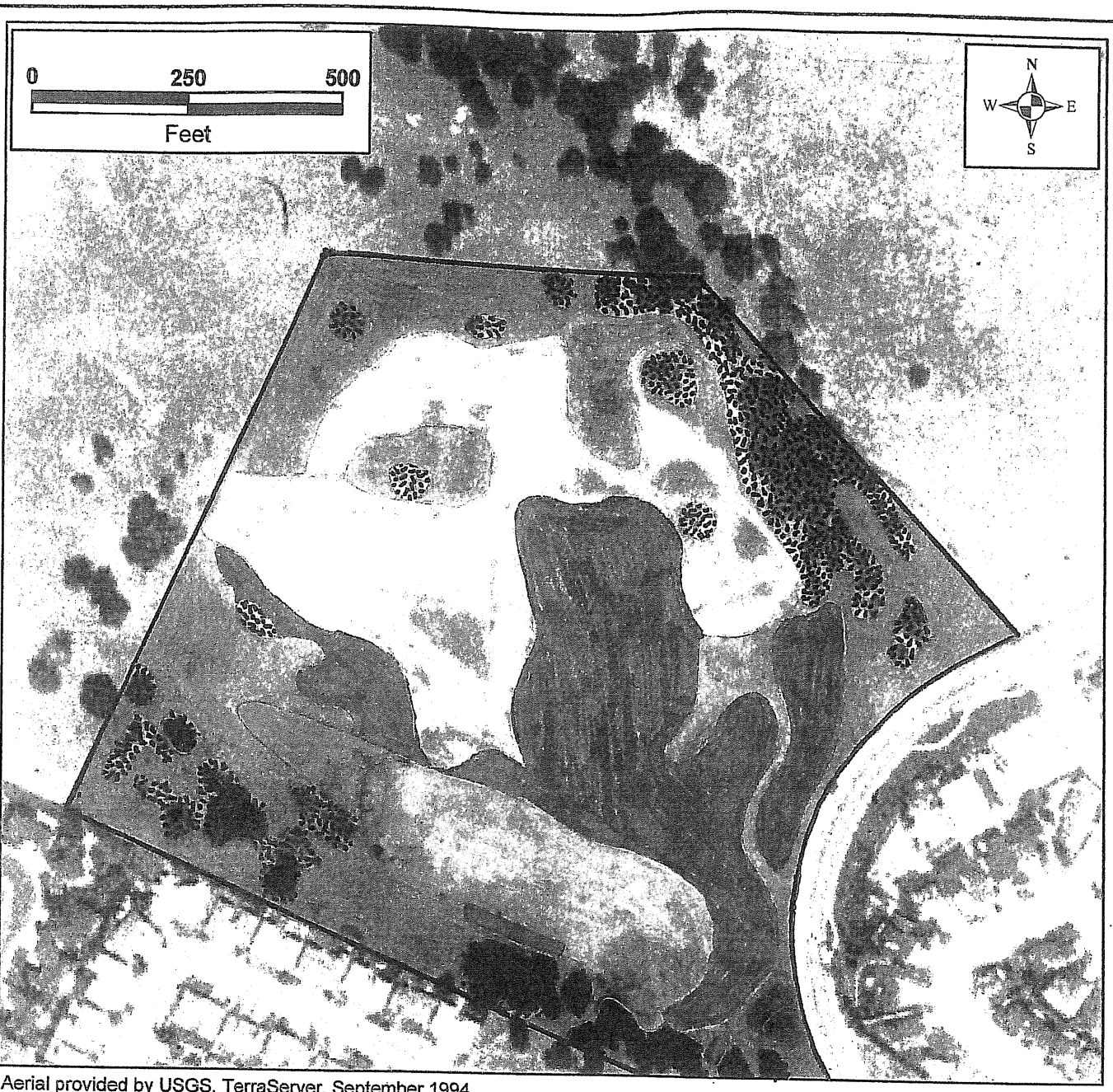

Aerial provided by USGS, TerraServer. September 1994.

Coastal Christian School

Biological Resources Assessment

HABITAT TYPES

- = Non-native Annual Grassland
- = Coast Live Oak Woodland
- = Riparian Woodland
- = Wetland
- = Coastal Scrub
- = Ruderal/Disturbed
- = Pismo Clarkia Occurrence
- = Property Line

Habitat Map

TABLE 1. Plant Species Observed on The Coastal Christian School Project Site During Site Visits Conducted May 16 and 22, 2002.

Scientific Name	Common Name
Achillea millefolium	yarrow
Agoseris apargioides	agoseris
Anagallis arvensis	scarlet pimpernel
Arctostaphylos wellsii	Wells' manzanita
Artemisia californica	California sage brush
Artemisia douglasiana	mugwort
Asclepias fascicularis	California milkweed
Avena barbata	slender wild oats
Baccharis pilularis var. *consanguinea*	coyote brush
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Bromus hordeaceous	soft chess
Bromus madritensis ssp. *rubens*	red brome
Carduus pycnocephalus	Italian thistle
Carpobrotus edulis	iceplant
Cirsium vulgare	bull thistle
Clarkia purpurea ssp. *quadrivulnera*	four spot
Clarkia speciosa ssp. *immaculate*	Pismo clarkia
Conium maculatum	poison hemlock
Convolvulus arvensis	field bindweed
Cyperus eragrostis	nut sedge
Dichelostemma capitatum	blue dicks
Eleocharis macrostachya	common spike rush
Epilobium brachycarpum	panicle flowered willow herb
Eremocarpus setigerus	turkey mullein
Ehrharta calycina	Veldt grass
Eriophyllum confertiflorum	golden yarrow
Erodium botrys	storksbill
Erodium cicutarium	red-stemmed filaree
Eschscholzia californica	California poppy
Gastridium ventricosum	nit grass
Gazania sp.	garden gazania
Gnaphalium californicum	California everlasting
Gnaphalium purpureum	purple cudweed
Hazardia squarrosa	sawtooth goldenbush
Heliotropium curassavicum	wild heliotrope
Hemizonia corymbosa	coast tarweed
Hemizonia fasciculata	fascicled tarweed
Heteromeles arbutifolia	toyon
Heterotheca grandiflora	telegraph weed
Hirschfeldia incana	summer mustard
Hordeum marinum ssp. *gussoneanum*	Mediterranean foxtail
Hordeum murinum ssp. *leporinum*	barnyard foxtail

Table 1 (continued).

Scientific Name	Common Name
Hypochaeris glabra	smooth cat's ear
Juncus phaeocephalus	brown-headed rush
Juncus tenuis	slender rush
Lactuca serriola	prickly lettuce
Lamarckia aurea	goldentop
Lessingia filaginifolia	common corethrogyne
Leymus triticoides	creeping wildrye
Lotus scoparius	deer weed
Lupinus nanus	sky lupine
Lupinus succulentus	arroyo willow
Malva nicaeensis	bull mallow
Marrubium vulgare	horehound
Medicago polymorpha	burclover
Nassella pulchra.	purple needlegrass
Pennisetum clandestinum	Kikuyu grass
Phacelia imbricata	imbricate phacelia
Picris echioides	prickly ox-tongue
Polypogon monspeliensis	rabbitfoot grass
Quercus agrifolia	coast live oak
Rhamnus californica	California coffeeberry
Rorippa nasturtium-aquatica	water cress
Rosa californica	California rose
Rubus ursinus	California blackberry
Rumex acetosella	sheep sorrel
Rumex crispus	curly dock
Rumex salicifolia	willow dock
Salix lasiolepis	arroyo willow
Salsola tragus	Russian thistle
Salvia mellifera	black sage
Salvia spathacea	hummingbird sage
Sanicula crassicaulis	Pacific sanicle
Scirpus californicus	tule
Scirpus cernuus	low club rush
Silene californica	California catchfly
Solanum xantii	nightshade
Sonchus asper ssp. *asper*	prickly sow thistle
Spergula rubra	purple sand spurry
Stephanomeria virgata	tall stephanomeria
Toxicodendron diversilobum	poison oak
Typha latifolia	cattail
Verbena lasiostachys	western vervain
Vicia villosa ssp. *villosa*	hairy vetch
Vulpia myuros	rattail fescue
Xanthium strumarium	cocklebur